



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/764,001

01/23/2004

Nicholas G. Duffield

Duffield 2003-0207

8944

7590  
Henry T. Brendzel  
P.O. Box 574  
Springfield, NJ 07081

05/16/2008

EXAMINER

MAIS, MARK A

ART UNIT

PAPER NUMBER

2619

MAIL DATE

DELIVERY MODE

05/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/764,001	<b>Applicant(s)</b> DUFFIELD ET AL.	
	<b>Examiner</b> MARK A. MAIS	<b>Art Unit</b> 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Jorgensen (USP 6,862,622).

3. With regard to claim 1, Jorgensen et al. discloses a method for assigning packets belonging to traffic of a network to different quality of service (QoS) treatments, comprising the steps of

receiving a packet [**Abstract**], and

assigning the packet to one of a preselected of QoS treatments, based to an attribute the packet, in accordance with a set of rules that was created pursuant to a statistical analysis of traffic in the network [**col. 15, lines 9-17; Differentiated service**

**classes are statistically categorized according to types, qualities, and classes of service. Moreover, the assignment of differentiated service classes are based on rules at least associated with priority, quality, and cost. Packet assignments are based on speed and latency—for example—which are directly and indirectly derived/based on packet attributes (e.g., identified voice packets have low latency thresholds and are assigned higher priority QOS treatments than data packets)].**

4. With regard to claim 13, Jorgensen et al. discloses a method executed in a network for assigning packet traffic to classes of service comprising the steps of

receiving a packet [**Abstract**]; and

assigning the packet to said one of said classes based on one or more attributes of the packet, pursuant to a mapping derived from analysis of past traffic on said network, which analysis correlates said one or more attributes associated with packets of different connections with connection features [**col. 15, lines 9-17; Differentiated service classes are statistically categorized according to types, qualities, and classes of service.**

**Moreover, the assignment of differentiated service classes are based on rules at least associated with priority, quality, and cost. Packet assignments are based on speed and latency—for example—which are directly and indirectly derived/based on packet attributes (e.g., identified voice packets have low latency thresholds and are assigned higher priority QOS treatments than data packets)].**

Art Unit: 2619

5. With regard to claim 14, Jorgensen et al. discloses a method for developing a corpus of data for creating set of rules for assigning packets for different QoS treatments, comprising the steps of:

selecting a set of classes [**col. 15, lines 9-17; Differentiated service classes are statistically categorized according to types, qualities, and classes of service. Moreover, the assignment of differentiated service classes are based on rules at least associated with priority, quality, and cost. Packet assignments are based on speed and latency—for example—which are directly and indirectly derived/based on packet attributes (e.g., identified voice packets have low latency thresholds and are assigned higher priority QOS treatments than data packets)**];

selecting a set of applications, where each of said applications unambiguously belongs to only one of said classes, and where said set is such that every one of said classes is covered by at least one of the application in the set [**col. 15, lines 9-17; Differentiated service classes are statistically categorized according to types, qualities, and classes of service. Moreover, the assignment of differentiated service classes are based on rules at least associated with priority, quality, and cost. Packet assignments are based on speed and latency—for example—which are directly and indirectly derived/based on packet attributes (e.g., identified voice packets have low latency thresholds and are assigned higher priority QOS treatments than data packets)**];

selecting a set of features; capturing traffic in a training network, which traffic belongs to applications that are included in said set; and developing statistics for said set of features for each of said classes from said traffic in said training network [**col. 58, line**

**58 to col. 59, line 2; for example, features such as buffer statistics (according to differentiated service classes) are stored for (statistical) analysis].**

6. With regard to claim 15, Jorgensen et al. discloses a method for developing a set of rules for assigning packets in a target network to different classes, comprising the steps of:

selecting one or more packet attributes [**Differentiated service classes are statistically categorized according to types, qualities, and classes of service. Moreover, the assignment of differentiated service classes are based on rules at least associated with priority, quality, and cost. Packet assignments are based on speed and latency—for example—which are directly and indirectly derived/based on packet attributes (e.g., identified voice packets have low latency thresholds and are assigned higher priority QOS treatments than data packets); differentiating between voice packets and data packets, for example, is inherent to layer/level 2/3 routing and switching];**

analyzing traffic in said target network to create statistical information for each value of said one or more packet attributes, which statistical information pertains to the selected set of features of claim 14 [**col. 58, line 58 to col. 59, line 2; for example, features such as buffer statistics (according to differentiated service classes) are stored for (statistical) analysis];** and

classifying each of said values of said one or more packet attributes into one of the classes of claim 14 based on a selected algorithms that investigates said statistical information for each of said values of said one or more packet attributes and the statistics

Art Unit: 2619

developed in the method of claim 14 [**col. 58, line 58 to col. 59, line 2; for example, features such as buffer statistics (according to differentiated service classes) are stored for (statistical) analysis**].

7. With regard to claim 2, Jorgensen et al. discloses that the network is an enterprise network that is part of a larger network [**Abstract**].

8. With regard to claim 3, Jorgensen et al. discloses that the larger network is the Internet [**Abstract**].

9. With regard to claim 4, Jorgensen et al. discloses that the attribute is a field in a header of said packet, and said assigning is based on value of said field [**Differentiated service classes are statistically categorized according to types, qualities, and classes of service. Moreover, the assignment of differentiated service classes are based on rules at least associated with priority, quality, and cost. Packet assignments are based on speed and latency—for example—which are directly and indirectly derived/based on packet attributes (e.g., identified voice packets have low latency thresholds and are assigned higher priority QOS treatments than data packets); differentiating between voice packets and data packets based on fields within headers, fields within payloads, flags, hashing functions, etc., for example, is inherent to layer/level 2/3 routing and switching**].

10. With regard to claim 5, Jorgensen et al. discloses that the field is a connection port number **[col. 18, lines 18-33]**.

11. With regard to claim 6, Jorgensen et al. discloses that the field is a source IP number **[col. 18, lines 18-33]**.

12. With regard to claim 7, Jorgensen et al. discloses that the field is a destination IP number **[col. 18, lines 18-33]**.

13. With regard to claim 8, Jorgensen et al. discloses that the step of assigning is based combination more than one attribute **[col. 18, lines 18-33]**.

With regard to claim 9, Jorgensen et al. discloses that the step of assigning is based values of said more than one attribute **[col. 18, lines 18-33]**.

14. With regard to claim 10, Jorgensen et al. discloses that the analysis process comprising the steps of:

obtaining statistical data regarding connections in said network, segregated by different values of said attribute, which statistical data pertains to preselected connection features **[col. 58, line 58 to col. 59, line 2]**, and

associating each of said values of said attribute with a class, pursuant to a classification that maps said statistical data to classes, based on previously conducted



Art Unit: 2619

training session that extracts characteristics of said preselected features of each of said classes [**col. 15, lines 9-17**].

15. With regard to claim 11, Jorgensen et al. discloses that the training process for executing said training session comprising the steps of:

selecting applications that are representative of different ones of said classes [**col. 58, line 58 to col. 59, line 2**]; and

analyzing traffic in a training network that belongs to said applications, to develop statistics for said preselected features [**col. 58, line 58 to col. 59, line 2**].

16. With regard to claim 12, Jorgensen et al. discloses that the training network encompasses more than said network where packets are assigned [**Abstract**].

17. With regard to claim 16, Jorgensen et al. discloses a step of mapping said classes to QoS treatments [**col. 15, lines 9-17**].

18. With regard to claim 17, Jorgensen et al. discloses that the step of analyzing to create statistical information creates said statistical information recursively [**col. 58, line 58 to col. 59, line 2**].

19. With regard to claim 18, Jorgensen et al. discloses that the step of analyzing analyzes traffic of a predetermined time interval of data [**this is inherent**].

*Response to Arguments*

20. Applicants' arguments filed January 18, 2008 have been fully considered but they are not persuasive.

21. With respect to claims 1-13, Applicants state that Jorgensen et al. fails to disclose assigning a packet to QOS treatments based on a packet attribute in accord with a set of rules created from statistical analysis of network traffic [**See Applicants' Amendment dated January 18, 2008, page 5, paragraphs 3-4**]. The examiner respectfully disagrees.

22. As noted above in the rejection of claim 1, differentiated service classes are statistically categorized according to types, qualities, and classes of service. Moreover, the assignment of differentiated service classes are based on rules at least associated with priority, quality, and cost. Packet assignments are based on speed and latency—for example—which are directly and indirectly derived/based on packet attributes [e.g., voice packets have low latency thresholds and are assigned higher priority QOS treatments than data packets].

23. With respect to claims 14-15, Applicants state that Jorgensen et al. fails to disclose “developing a corpus of data for creating a set of rules.” In response to applicant's arguments, the recitation “developing a corpus of data for creating a set of rules.” has not been given patentable weight because the recitation occurs in the preamble. A preamble

Art Unit: 2619

is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

24. With respect to claims 14-15, Applicants state that Jorgensen et al. fails to disclose selecting a set of service classes [**See Applicants' Amendment dated January 18, 2008, page 6, paragraph 3**]. Applicants also state that Jorgensen et al. fails to disclose selecting a set of applications [**See Applicants' Amendment dated January 18, 2008, page 6, paragraph 4**]. The examiner respectfully disagrees.

25. As noted in the rejection of claim 14 above, differentiated service classes are statistically categorized according to types, qualities, and classes of service. Moreover, the assignment of differentiated service classes are based on rules at least associated with priority, quality, and cost. Packet assignments are based on speed and latency—for example—which are directly and indirectly derived/based on packet attributes (e.g., identified voice packets have low latency thresholds and are assigned higher priority QOS treatments than data packets) [**col. 15, lines 9-17**].

26. Applicants state that Jorgensen et al. fails to disclose selecting features, capturing application traffic in the network, and developing statistics the selected features for each traffic class in the network [**See Applicants' Amendment dated January 18, 2008,**

Art Unit: 2619

**page 6, paragraphs 3-5].** Specifically, Applicants also argue that “capturing” packets is not present in Jorgensen et al. [**See Applicants’ Amendment dated January 18, 2008, page 6, paragraph 5].** Applicants also state that there is no training network in Jorgensen et al. [**See Applicants’ Amendment dated January 18, 2008, page 7, paragraph 1].** Applicants argue, apparently, that there is a lack of a specific statistical algorithm employed in Jorgensen et al (that is present in the present application) [**See Applicants’ Amendment dated January 18, 2008, page 7, paragraph 1].** The examiner respectfully disagrees.

27. As noted in the rejection of claims 14 above, features such as buffer statistics (according to differentiated service classes) are stored for (statistical) analysis [**col. 58, line 58 to col. 59, line 2].**

28. In response to applicant's argument that there is a missing training network, a recitation of the intended use of the claimed invention (training network versus any other network) must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

29. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a specific statistical algorithm) are not recited in the rejected claim(s). Although the claims

Art Unit: 2619

are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

30. “Capturing” packets, as understood by the examiner, needs only for the network to detect/read that the packets are traveling on the network links. If the packets can be detected/read, they are interpreted as “captured.” If Applicants intend “captured” to mean something other than a packet being detected/read, such a limitation is not seen in the claims. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “capturing” packets meaning something other than the packet being detected/read) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

31. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2619

32. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Klaghofer et al. (USP 7,359,320), Method for supporting quality of service features in heterogeneous communications networks.

(b) Boll et al. (USP 7,305,676), Communication device configured for real time processing of user data to be transmitted.

(c) Turkoglu (USP 7,302,682), Method and system for creating a quality of service message.

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK A. MAIS whose telephone number is (571)272-3138. The examiner can normally be reached on M-Th 5am-4pm.

Art Unit: 2619

35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

May 9, 2008

/Mark A. Mais/

Examiner, Group Art Unit 2619

/Wing F. Chan/

Supervisory Patent Examiner, Art Unit 2619

5/12/08